

Anti-Glycogen Synthase 1 phospho S641 GYS1 Antibody

Catalog Number: P03512-3

About GYS1

Anti-Glycogen synthase 1 pS641 is validated by IHC, Western Blot and ELISA. Human muscle glycogen synthase (GS) is responsible for the biosynthesis of glycogen from phosphorylated glucose units. Mammalian liver and muscle contain GS consisting of four subunits with a total molecular weight of 360,000. GS is subject to regulation through both allosteric and covalent modification and occurs in two forms: the phosphorylated inactive form, and the dephosphorylated active form. GS is inactivated by the serine/threonine kinase called glycogen synthase kinase-3b that mainly functions to phosphorylate muscle glycogen synthase. This antibody is specific for the phosphorylated form of GS at S641. Phosphorylation of GS at S641 has been associated with Antiphospholipid Antibody Syndrome.

Overview

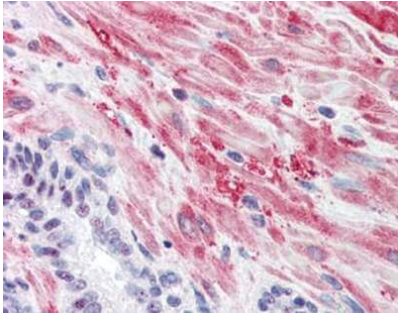
Product Name	Anti-Glycogen Synthase 1 phospho S641 GYS1 Antibody
Reactive Species	Human, Mouse
Description	Boster Bio Anti-Glycogen Synthase 1 phospho S641 GYS1 Antibody (Catalog # P03512-3). Tested in ELISA, IHC, WB applications. This antibody reacts with Human, Mouse.
Application	ELISA, IHC, WB
Clonality	Polyclonal
Formulation	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2, 0.01% (w/v) Sodium Azide
Storage Instructions	Store Phospho GYS Antibody at -20°C prior to opening. Aliquot contents and freeze at -20°C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4°C as an undiluted liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening. (Ship on dry ice.)
Host	Rabbit
Uniprot ID	P13807

Technical Details

Immunogen	Human Muscle Glycogen Synthase phospho peptide corresponding to a S641 region of the human protein conjugated to Keyhole Limpet Hemocyanin (KLH).
Predicted Reactive Species	Bovine, Canine
Isotype	IgG
Form	Liquid (sterile filtered)
Concentration	1.0 mg/mL by UV absorbance at 280 nm

Purification	Phospho Glycogen Synthase pS641 antibody is directed against human muscle glycogen synthase. The product was affinity purified from monospecific antiserum by immunoaffinity purification. Antiserum was first purified against the phosphorylated form of the immunizing peptide. The resultant affinity purified antibody was then cross-adsorbed against the non-phosphorylated form of the immunizing peptide. This phospho specific polyclonal antibody is specific for phosphorylated pS641 of human muscle glycogen synthase. Reactivity with non-phosphorylated human muscle glycogen synthase is less than 1% by ELISA. Cross-reactivity with muscle glycogen synthase occurs in mouse tissue. Reactivity with muscle glycogen synthase from other sources has not been determined.
Suggested Dilutions	ELISA: 1:20,000 - 1:60,000 IHC: 1:1,000 - 1:5,000 WB: 1:1,000 - 1:10,000 This phospho specific polyclonal antibody was tested by immunoblotting, immunohistochemistry, and ELISA. By ELISA the antibody was found to be reactive with the phosphorylated form of the immunizing peptide and minimally reactive with the non-phosphorylated form of the immunizing peptide. Immunoblotting will detect human and mouse muscle glycogen synthase. Although not tested, this antibody is likely functional in immunoprecipitation.

Anti-Glycogen Synthase 1 phospho S641 GYS1 Antibody (P03512-3) Images



Immunohistochemistry with Anti-Glycogen Synthase antibody. Tissue: Human Prostate. Fixation: formalin-fixed, paraffin-embedded tissue. Antigen retrieval: heat-induced. Primary antibody: 5 µg/ml. Staining: antibody as precipitated red signal with a hematoxylin purple nuclear counterstain.

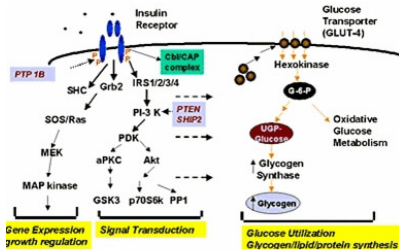
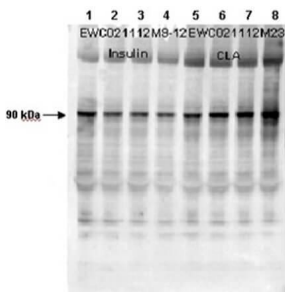


Diagram of glycogen synthase as a component of insulin signal transduction pathways.



Affinity Purified Phospho-specific pS641 antibody to human muscle Glycogen Synthase (GS). Lane 1: mouse cardiac myocyte lysate mock treated. Lane 2: mouse cardiac myocyte lysate insulin treated at 10nM for 15'. Lane 3: mouse cardiac myocyte lysate insulin treated at 100nM for 15'. Lane 4: mouse cardiac myocyte lysate insulin treated at 1nM for 15'. Lane 5: mouse cardiac myocyte lysate mock treated. Lane 6: mouse cardiac myocyte lysate CLA treated at 4nM for 45'. Lane 7: mouse cardiac myocyte lysate CLA treated at 20nM for 45'. Lane 8: mouse cardiac myocyte lysate CLA treated at 100nM for 45'. Load: 12µL. Primary Antibody: pS641 at 1:1000. Secondary Antibody: HRP conjugated Gt-a-Rabbit IgG (611-103-122) at 1:5,000 dilution preceded color development using Amersham's substrate system. Other detection methods will yield similar results.

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